

Multi-Path Storage Connections

INTRODUCTION

Multi-path is a technique to connect a server to a storage device using two connections rather than one. This provides an alternate connectivity path in the event of a path failure thus increasing overall data availability. It also provides up to double the data throughput in heavy data access environments and offers load balancing to maximize the use of each path.

To accomplish multi-path benefits, multiple connections are required on the data storage device with multiple Host Bus Adapters (HBAs). FlashDisk products are multi-hosted in both Fibre Channel and SCSI versions and thus do not require expensive external switches to provide multiple connection ports. Each server connected to the storage can use single or dual paths independently as needed by the application. This is much less expensive than very popular alternatives that require all servers connected to the storage to use two paths.

The multi-host capability of FlashDisk makes multi-path connectivity simple and affordable without expensive switches and requires multi-path connections only to selected servers.

WHY MULTI-PATH STORAGE CONNECTIONS

- High availability storage connectivity
- High data transfer rates
- Low cost

REQUIREMENTS

- Disk array with multiple ports
- Multi-path HBA or software

TYPICAL ENVIRONMENTS

- Database applications
- Selected servers needing high availability

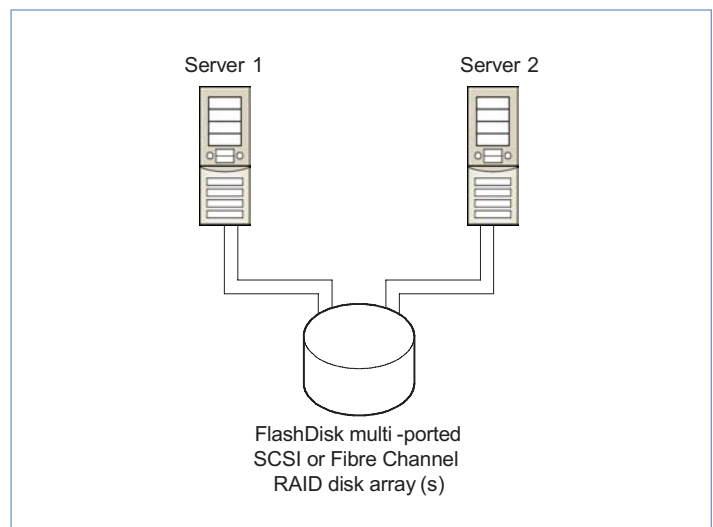
BENEFITS

- High availability data access
- High productivity
- Low cost

HOW IT WORKS

In Windows environments, the QLogic HBA includes multi-path capability. Winchester Systems is an authorized QLogic partner and provides the QLogic HBAs in Windows environments. The HBA is easily configured for multi-path support the setup is completely transparent to the applications and host operating system.

In Solaris environments, Veritas Volume Manager, which includes the Dynamic Multi-Path (DMP) feature, is installed on the each host server. Winchester System is an authorized Veritas partner and provides Veritas Volume Manager software in Solaris environments and also supports existing Volume Manager installations. The Veritas software handles all the data requests and again the multi-path data access is transparent to the applications and host operating system.



The diagram shows how servers are connected to the storage device using two connections from two HBAs. This provides continued data access in the event of a path failure and up to twice the data throughput for data intensive applications - at very low cost